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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/676,727	09/29/2000	Francis X. Canning	CANNING.001A	2872
20995 7590 10/17/2007 KNOBBE MARTENS OLSON & BEAR LLP 2040 MAIN STREET FOURTEENTH FLOOR IRVINE, CA 92614			EXAMINER DAY, HERNG DER	
			ART UNIT 2128	PAPER NUMBER
			NOTIFICATION DATE 10/17/2007	DELIVERY MODE ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

jcarter@kmob.com  
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## Office Action Summary

**Application No.**

09/676,727

**Applicant(s)**

CANNING, FRANCIS X.

**Examiner**

Herng-der Day

**Art Unit**

2128

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 08 August 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-22, 34, 36, 37 and 40-55 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22, 34, 36, 37 and 40-55 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |                                                                                                                                 |                                                                                         |
|---------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                                                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                            | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date <u>8/8/07</u> . | 6) <input type="checkbox"/> Other: _____                                                |

### **DETAILED ACTION**

1. This communication is in response to Applicant's Amendments and Response ("Amendment") to Office Action dated May 8, 2007, filed August 8, 2007.

1-1. Claims 1, 2, and 10 have been amended. Claims 35 and 39 have been canceled. Claim 55 has been added. Claims 1-22, 34, 36-37, and 40-55 are pending.

1-2. Claims 1-22, 34, 36-37, and 40-55 have been examined and rejected.

### ***Information Disclosure Statement***

2. The information disclosure statement filed August 8, 2007 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because the Cited documents No. 20-26 are not prior art and the prosecution on the merits of each related application is not closed. It has been placed in the application file, but the information referred to therein has not been considered as to the merits.

### ***Claim Objections***

3. Claim 55 is objected to because the last second step has a period "." at the end of the step.

### ***Claim Rejections - 35 USC § 112***

4. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

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5. Claims 10-22 and 50-54 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

5-1. Independent claim 10 recites the newly added limitation “using said compressed nature to efficiently compute an electric field” in line 17 of the claim, which does not appear to have support in the original disclosure.

5-2. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 10-22, 36-37, and 50-54 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

7-1. Claim 10 recites the limitation “using said compressed nature to efficiently compute an electric field” in line 17 of the claim. It is vague and indefinite because it is unclear what “said compressed nature” is really referred to.

7-2. Claim 36 is rejected as being dependent on the canceled claim 35.

7-3. Claims not specifically rejected above are rejected as being dependent on a rejected claim.

***Claim Rejections - 35 USC § 101***

8. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

9. Claims 1-22, 34, 36-37, and 40-55 are rejected under 35 U.S.C. 101 because the inventions as disclosed in claims are directed to non-statutory subject matter.

9-1. Claims 1-22, 34, 36-37, and 40-55 are directed to the manipulation of abstract ideas of data compression, calculating composite sources and testers, and transforming system of equations. This claimed subject matter lacks a practical application of a judicial exception (law of nature, abstract idea, naturally occurring article/phenomenon) since it fails to produce a useful, concrete, and tangible result.

As stated in the MPEP 2106 IV, “Likewise, a claim that can be read so broadly as to include statutory and nonstatutory subject matter must be amended to limit the claim to a practical application. In other words, if the specification discloses a practical application of a section 101 judicial exception, but the claim is broader than the disclosure such that it does not require a practical application, then the claim must be rejected.” and “The tangible requirement does not necessarily mean that a claim must either be tied to a particular machine or apparatus or must operate to change articles or materials to a different state or thing. However, the tangible requirement does require that the claim must recite more than a 35 U.S.C. 101 judicial exception, in that the process claim must set forth a practical application of that judicial exception to produce a real-world result. Benson, 409 U.S. at 71-72, 175 USPQ at 676-77 (invention ineligible because had “no substantial practical application.”).”

Specifically, the claimed subject matter describes nothing more than the manipulation of abstract ideas of data compression, calculating composite sources and testers, and transforming system of equations, which are basic mathematical constructs. More specifically, the claimed subject matter provides for transforming a system of linear equations to use the composite sources and/or the composite testers to produce a second system of equations and computing a resulting electric field, a pressure field, or a disturbance. This produced result remains in the abstract.

Furthermore, as described in the specification in lines 10-11 of page 6, "The terms "sources" and "physical sources" are used herein to include all types of actual and/or fictitious sources." Accordingly, even reciting computing electric field or pressure field in independent claims 1, 2, and 10, claims 1-22, 34, 36-37, and 40-55 are not for a particular practical application of the idea of compression of interaction data embodied therein but seeking to patent substantially every application of the idea of compression of interaction data, which is an attempt to patent the idea itself and is not permitted. *Diehr*, 450 U.S. at 191, 209 USPQ at 10. *Benson*, 409 U.S. at 71-72, 175 USPQ at 676; cf. *Diehr*, 450 U.S. at 187, 209 USPQ at 8.

### ***Recommendations***

10. Claim 7 recites the limitations "plurality of directions" in line 1 and line 2 of the claim. For clarification purposes, the Examiner suggests that "plurality of directions" be replaced with "plurality of angular directions".

### ***Applicant's Arguments***

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**11. Applicant argues the following:**

**11-1. Response to Rejection of Claim 39 Under 35 U.S.C. 112, Second paragraph**

(1) "Claim 39 has been canceled." (page 11, paragraph 4, Amendment)

**11-2. Response to Rejection of Claims 1-22, 34-37 and 39-54 Under 35 U.S.C. 101**

(2) "Applicant argues that the invention has a practical application, as it provides a more efficient method of computation. Also, the claims have been amended to recite a second practical application, the computation of a physical effect due to a physical source. Furthermore, these claims do not "preempt every substantial application" since they do not preempt applications to image compression." (page 11, paragraph 6, Amendment)

**11-3. Response to Rejection of Claims 1-22, 34-37 and 40-54 Under 35 U.S.C. 102(b)**

(3) Rockwell does not teach or make obvious the invention claimed in Claims 1-22, 34, 36-37, and 40-54. (pages 11-17, Amendment)

***Response to Arguments***

**12. Applicant's arguments have been fully considered.**

**12-1.** Applicant's argument (1) is persuasive. The rejections of claim 39 under 35 U.S.C. 112, second paragraph, in Office Action dated May 8, 2007, have been withdrawn.

**12-2.** Applicant's argument (2) is not persuasive. Claims 1-22, 34, 36-37, and 40-55 are currently rejected under 35 U.S.C. 101 as detailed in section 9-1 above because the claimed subject matter lacks a practical application to produce a useful, concrete, and tangible result. Furthermore, claims 1-22, 34, 36-37, and 40-55 are not for a particular practical application of the idea of compression of interaction data embodied therein but seeking to patent substantially

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every application of the idea of compression of interaction data, which is an attempt to patent the idea itself and is not permitted. Image compression does not appear to be an application of the idea to compress interaction data via processing disturbances.

**12-3.** Applicant's argument (3) is persuasive. The rejections of claims 1-22, 34-37 and 39-54 under 35 U.S.C. 102(b) in Office Action dated May 8, 2007, have been withdrawn.

### ***Conclusion***

**13.** Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

**14.** Any inquiry concerning this communication or earlier communications from the Examiner should be directed to Herng-der Day whose telephone number is (571) 272-3777. The Examiner can normally be reached on 9:00 - 17:30.



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Any inquiry of a general nature or relating to the status of this application should be directed to the TC 2100 Group receptionist: (571) 272-2100.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Kamini S. Shah can be reached on (571) 272-2279. The fax phone numbers for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Herng-der Day  
October 2, 2007

H.D.

  
KAMINI SHAH  
SUPERVISORY PATENT EXAMINER